Regulatory Submittal Part IV

Waste Sampling and Management Plan

Remediation and Deconstruction of
Fiterman Hall
30 West Broadway
New York, New York

Prepared for:

Dormitory Authority of the State of New York
&
City University of New York

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1.0 General

1.1 Objective

The objective of the Waste Sampling and Management Plan (WSMP) is to characterize, manage, containerize, and legally transport and dispose of waste streams that will be generated as part of the Fiterman Hall Remediation & Deconstruction Project.

1.2. Background

Pei Cobb Freed & Partners, Architects, LLP (PCF-P) has engaged the Environmental Consultant, Airtek Environmental Corp. (Airtek) on behalf of the Dormitory Authority of the State of New York (DASNY) and the City University of New York (CUNY) to prepare the WSMP in support of the remediation and deconstruction of Fiterman Hall, located at 30 West Broadway, New York, NY (the Building). This plan is in response to a request by the WTC Regulators for a documented approach to the project, and is Part IV of the Regulatory Submittal Package for the Project.

The Building was severely impacted by fallout from the events of September 11, 2001. It is the Owner's intent to conduct remediation of WTC-related contamination and abatement of in-place asbestos so that conventional deconstruction activities can be completed.

1.3 Remediation Phase

The Remediation Phase of the project includes the removal of all interior surfaces and non-structural elements within the Building, and the cleaning and encapsulation of all remaining structural elements under containment. The cleanup and abatement will be conducted so that the building can be safely deconstructed to allow for redevelopment of the Site. The Remediation Phase of the project will occur under negative pressure containment and includes the following general categories: (a) the general area cleanup of WTC dust and debris; (b) removal and disposal of installed non-structural porous and non-porous building materials, contents and components; (c) cleaning and salvage of certain installed non-porous building equipment and components; (d) removal of building materials containing asbestos which were present in the Building prior to September 11, 2001; (e) packaging of asbestos and other regulated waste including, but not limited to light bulbs, lighting ballasts, batteries, mercury-containing thermostats, etc. at generation points; (f) movement of containers to the decontamination unit and movement of decontaminated containers to waste loading.

1.4 Deconstruction Phase

The Deconstruction Phase of the project includes the structural deconstruction of the Building, including the remaining cleaned and encapsulated structural concrete and steel components, and the steel and masonry façade.

2.0 Primary Material Categories

This WSMP has been developed to address the removal of all building contents and components, including waste generated by the Remediation Phase (i.e., asbestos abatement, CoPC abatement, handling and packaging of building contents and deconstruction waste) and the Deconstruction Phase (structural components and masonry façade). Anticipated waste streams are listed below:

2.1 Regulated Contaminants

- WTC Dust - Contaminants of Potential Concern (CoPCs)
- CoPC-impacted Building Materials (ACM at a Minimum)
- Asbestos-containing Building Materials (ACBMs)
- Lead-painted Building Materials

2.2 PPE and Remediation Process Consumables

- Personal Protective Equipment (Suits/filters/gloves/booties)
- Abatement Materials (rags, bags, poly sheeting)
- HEPA Vacuum Bags/Negative Air Filters
- Miscellaneous Contaminated Disposables

2.3 Deconstruction Waste

- Wall and Ceiling Plaster
- Suspended ceiling tiles and support grid
- Carpeting and other permeable flooring
- Gypsum Wall Board (GWB) and associated partition framing
- Fiberglass and other misc. insulation
- Limited remaining interior furnishings
- Door Systems and Window Systems
- Mechanical Electrical Plumbing (MEP) components including, but not limited to:
    - HVAC System Components
    - Plumbing System Components
    - Electrical Wiring System Components.

2.4 Universal Waste

40 CFR Part 273 and 6 NYCRR Section 374.3 establishes requirements for managing wastes referred to as, "Universal Wastes. These are materials that would be classified as hazardous wastes, but due to their universal use in commercial, industrial, and residential properties, have been so categorized to reduce the regulatory burden on generators of these wastes.

Universal wastes include the following waste types:

(1) Batteries as described in 40 CFR section 273.2 and 6 NYCRR Section 374-3.1(b)
(2) Pesticides as described in 40 CFR section 273.3 and 6 NYCRR Section 374-3.1(c)
(3) Thermostats as described in 40 CFR section 273.4 and 6 NYCRR Section 374-3.1(d)
(4) Lamps as described in 40 CFR section 273.5 and 6 NYCRR Section 374-3.1(e)

2.5 PCB Waste

The PCB waste category may include dielectric fluid from electrical equipment such as transformers and capacitors as well as fluids associated with hydraulic machinery, vacuum pumps, compressors and heat exchangers. The category may include fluorescent lighting ballasts and caulking products. The NYS Education Department now requires testing of exterior caulking materials for PCBs.

2.6 Miscellaneous Contents

Due to the classroom educational use of the building and the lack of wet chemistry labs, regulated and/or hazardous waste is anticipated to be very limited in nature and scope. The 30 West Broadway Building was, however, under renovation when the Building was vacated after 9/11, and as such, a variety of construction material and chemical containers have been found and catalogued throughout certain areas of the Building. The WSMP addresses the potential for miscellaneous waste as listed in *Attachment A - Building Contents Inventory & Chemical Log.*

Refrigerant-Containing Equipment:

Non-hazardous construction and demolition materials may contain regulated refrigerant including, but not limited to, possible refrigerant in the air conditioning and refrigeration systems. The refrigerant will be removed prior to disposal. Refrigerant-containing Equipment would be considered an appliance and is excluded from definition as C&D debris.

2.7 Non-Porous (Cleanable) Waste

Certain non-porous deconstruction waste such as unpainted scrap metals may be cleaned and classified, managed, and recycled/disposed of as non-hazardous C&D debris. Cleaned, painted, non-porous deconstruction waste with waste characterization greater than applicable standards would be classified, managed and disposed of as hazardous waste with the toxicity characteristic of the exceeded Resource Conservation and Recovery Act (RCRA) characteristic. Non-cleaned, non-porous deconstruction waste will be disposed of as asbestos waste at a minimum, and in accordance with the determinations of the dust characterization study that is discussed in Section 4.1.

2.8 Structure & Façade

At completion of the Remediation Phase only the steel, concrete and glass structural components and exterior masonry & metal façade materials of the buildings will remain. The interior materials will have been decontaminated as a part of the Remediation Phase, and focused cleaning of exterior façade components will have been conducted. The exceptions to this are specific non-friable asbestos-containing components of the façade that will be abated and managed per a site-specific variance from the NYS Department of Labor (NYS DOL), and disposed as ACM waste at a minimum.

The classification of building components and contents will be an ongoing effort and will be conducted by the Environmental Consultant in accordance with applicable New York City, New York State and federal laws, rules, and regulations. This Plan is intended as a working document to be used during ongoing operations at the Site, and will be updated as necessary as new information becomes available.

3.0 Overall Waste Characterization Strategy

As was proposed at 130 Liberty Street by the Lower Manhattan Development Corp. (LMDC), samples of WTC dust will be collected throughout the 30 West Broadway structure and analyzed for Full TCLP, RCRA Characteristics and Total PCBs. Sample site selection will be designed to be representative of the various conditions noted throughout the structure. Representativeness of the sampling plan is discussed in Section 4.0. Results of these samples will be compared to the criteria provided in 40 CFR Part 261 sections 21 through 24 and Environmental Protection Agency Publication SW 846 Chapter 7. The results of these comparisons will inform further waste characterization sampling activities as follows:

- Where dust classification sampling indicates that the dust is not a characteristic hazardous waste, any non-hazardous materials potentially

impacted by dust (i.e., the Deconstruction Waste listed in subsection 2.3 above) will be assumed to be non-hazardous for handling and disposal purposes.

- This assumption will be applied to all deconstruction waste that is not suspected to be hazardous waste based on its original (pre-9/11) composition.

- Where analytical results indicate that dust in a portion of the building is classified as a particular category of regulated waste, then dust-impacted materials in that portion of the building will be likewise classified until and unless testing indicates otherwise.

- Any material suspected to be hazardous waste or other RCRA –regulated waste will be tested and evaluated based on its composition.

For materials requiring sampling, a representative sampling strategy will be used as detailed in Section 4.0, and composite samples representative of the suspect waste streams will be collected. The locations and frequency of samples to be combined into composite samples shall be determined by the Environmental Consultant such that a representative sample of the waste type has been obtained. All sampling personnel shall be familiar with sample collection and waste storage protocols and shall have undergone Hazard Communication training in accordance with 29 CFR Section 1910.1200 as well as being trained appropriately per the Health and Safety Plan.

The waste classification samples will be sent to laboratories accredited by the NYS Department of Health under the NELAC Program, certified under 6 NYCRR Section 370.1(f), and qualified for waste classification analysis (e.g., TCLP and RCRA characteristics). Testing will determine waste classification and handling requirements (40 CFR Section 262.11). Other sampling and laboratory analysis may be required by the disposal facility prior to waste acceptance. The laboratory subcontracted to perform the analysis will be also be certified through NELAC for the analytical parameters being analyzed.

All potentially hazardous waste will be managed as hazardous waste until analytics prove otherwise. If greater than 100 kg/month of hazardous waste is generated during the deconstruction process, Contractor will comply with, among other things, 6 NYCRR Part 373, Subpart 373-3, section 373-3.3(b).

If results of waste characterization sampling and analysis dictate that waste material must be managed and disposed of as both an asbestos and a hazardous waste, both asbestos and hazardous waste management and disposal requirements will be met. If there are conflicts between the requirements for asbestos and hazardous waste that preclude compliance with both, then the hazardous waste requirements will dictate specific management and disposal requirements.

4.0 Sampling Frequencies

4.1 Contaminants

A full-building asbestos survey has been conducted. In-place Asbestos-Containing Building Materials (ACBM) have been identified, located and included in the Project Plan. No further characterization will be conducted unless site conditions reveal additional suspect materials not addressed in the ACBM surveys. Lead paint testing has detected only a small quantity (<100sf) of lead paint in the Building. Again, as remediation and deconstruction reveal materials heretofore uncharacterized, testing will be conducted as appropriate.

WTC dust characterization will be conducted throughout the facility in accordance with an organized sampling protocol approved by EPA, and established to ensure representativeness of sample results. On a floor-by-floor basis (16 floors), five grab samples of dust will be collected for compositing at the laboratory. These 16 samples will be analyzed in accordance with the analytical methodologies detailed in Section 5.0 (full TCLP, RCRA characteristics, total PCBs). The results of these analyses will be applied to waste sampling and management decisions for the other primary waste categories on a spatial basis relative to the source location of the applicable representative sample. Where analyses indicate that the dust exceeds RCRA criteria for any one RCRA characteristic, materials potentially impacted by the dust will be assumed to exceed that specific RCRA characteristic unless testing proves otherwise.

Details of the representative composite sampling to be conducted in response to the results of the dust characterization will be the subject of a revised WSMP to be submitted upon completion of the dust characterization study.

4.2 PPE and Remediation Process Consumables

RCRA characterization testing will be conducted on composite samples of spent filters, filter media, personal protective equipment (PPE), and other project consumables. A minimum of three grab samples will be collected at random from 10% of the packages (bags/drums) of this class of material. Grab samples from every five packages sampled will be composited for analysis. These materials will be packaged and disposed of as asbestos waste at a minimum unless hazardous waste characterization testing indicates that the material must be managed as a hazardous waste as well as an asbestos waste. Used PPE and Remediation Process Consumables will be packaged, handled and stored per the results of the dust characterization study pending RCRA hazardous waste characterization of composited samples. Locations of work that produced

the PPE and consumables will be recorded to assist in ensuring that sampling will be representative.

4.3 Deconstruction Waste

As noted in Section 4.1 above, dust characterization for hazardous waste characteristics will be performed. If dust classification sampling indicates that the dust is not a characteristic hazardous waste, and then by extension, any non-hazardous materials potentially impacted by dust (i.e., the Deconstruction Waste listed in subsection 2.3 above) would also not be hazardous. Where analyses indicate that the dust exceeds RCRA criteria for any one RCRA characteristic, deconstruction waste materials potentially impacted by the dust, as determined by the Environmental Consultant will be assumed to exceed that specific RCRA characteristic unless testing proves otherwise.

Within any floor of the building where dust exhibits RCRA-regulated levels of contamination, representative composite sampling of deconstruction waste will be conducted. Analyses will be for only the specific RCRA characteristic that was noted in the dust characterization study.

4.4 Universal Waste

Universal waste items will not be tested, but will be cleaned of dust by the application of HEPA-vacuuming and wet-wiping procedures prior to containerization.

4.5 PCB Waste

All ballasts, including those labeled “No PCB” will be containerized for disposal as PCB waste due to the presence of potting material. Potentially PCB-containing equipment other than ballasts, will be inspected and sampled as required to determine whether the dielectric fluid contains more than 50 parts per million (ppm) PCBs, which would make the equipment subject to the PCB regulations. As required by the NYS Education Department, representative samples of caulking material will be collected and analyzed prior to the deconstruction, and will be tested to determine the concentration of PCBs.

4.6 Miscellaneous Contents

Initial characterization has been conducted by review of existing labels and/or Material Safety Data Sheets (MSDSs), as noted in the *Chemical Log* included in Attachment A. Specific requirements beyond initial characterization are found in the applicable federal, state and city solid and

hazardous waste and DOT regulations. The Remediation Contractor will be required to identify and apply the specific regulatory programs applicable to specific waste types.

The Environmental Consultant will conduct daily inspections of the abatement work area to identify suspect components for segregation and testing and/or other determination.

Any material classified as "unknown" during the project will require sample collection and analysis for full RCRA characteristics in accordance with 40 CFR Part 261 and will be disposed of based upon the results of that sampling and the nature of the waste. If the material is classified as RCRA hazardous waste, additional sampling may be required for "total" concentrations of specific contaminants to determine whether the waste may be land filled or is restricted from land disposal pursuant to 40 C.F.R. Part 268; the contaminants to be analyzed for will depend on the specific waste classification of the waste.

If additional categories of waste that are suspected to have different waste characteristics than those sampled are observed during the work, these materials will be sampled for waste characterization prior to removal. Materials similar in composition and WTC impact to those sampled would not be sampled for Resource Conservation and Recovery Act (RCRA) characteristics unless there is an independent concern that they might be hazardous waste due to the inherent composition of the component, subcomponent or waste stream.

4.7 Non-Porous (Cleanable) Waste

Non-Porous Deconstruction Waste may be managed by either of two options. The Remediation Contractor may choose to clean (HEPA vacuum and wet-wipe) the non-porous surfaces in accordance with procedures outlined in Section 6.3.5 of *Regulatory Submittal Part I- Work Plan*. The resulting cleaned material would be subject to visual inspection by the Environmental Consultant, but will not be sampled unless it is painted; in which case, representative sampling for TCLP Metals will be performed. Alternatively, based on field conditions and decisions regarding the use of its labor force, the Remediation Contractor may choose not to clean the surfaces and instead manage those uncleaned non-porous materials as asbestos waste at a minimum and as required by the determinations of the dust characterization study. In either case, the methods of cleaning , packaging, transport and disposal of these wastes shall be in strict accordance with applicable regulations and the site-specific Health & Safety Plan, and shall be equally protective of site workers and the environment.

4.8 Structure & Façade

At completion of the Remediation Phase only the steel and masonry structure and the facade will remain, with the exception of specific non-friable ACBM items that will be abated as part of the Deconstruction Phase. The remaining materials will have been HEPA vacuumed, wet wiped, and spray-encapsulated.

Dust sampling for hazardous waste characteristics will have been performed in advance of deconstruction activities. If dust classification sampling indicates that the dust is not a characteristic hazardous waste, and then by extension, any non-hazardous materials potentially impacted by dust (i.e., the Structure & Façade of the building would also not be hazardous. Where analyses indicate that the dust exceeds RCRA criteria for any one RCRA characteristic, structure and facade waste materials potentially impacted by the dust will be assumed to exceed that specific RCRA characteristic unless testing proves otherwise.

Within any floor of the building where dust exhibits RCRA-regulated levels of contamination, representative composite sampling of structure and façade waste will be conducted. Analyses will be for only the specific RCRA characteristic that was noted in the dust characterization study.

5.0 Analytical Methodologies

Analyses conducted to support waste characterization will be performed according to the following methodologies. Where more than one method is identified, each analytical method is valid per the regulations.

5.1 Toxicity

Method 1311 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846 as follows:

– Volatile organic compounds (VOCs) - Method 8260B of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846. VOC toxic constituents include benzene (D018), carbon tetrachloride (D019), chlorobenzene (D021), chloroform (D022), 1,4-dichlorobenzene (D027), 1,2-dichloroethane (D028), 1,1-dichloroethylene (D029), methyl ethyl ketone (D035), tetrachloroethylene (D039), trichloroethylene (D040), and vinyl chloride (D043).

– Semivolatile organic compounds (SVOCs) - Method 8270C of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846. SVOC toxic constituents include 2,4-dinitrotoluene (D030), hexachlorobenzene (D032), hexachlorobutadiene (D033), hexachloroethane (D034), o-cresol (D023), m-cresol (D024), p-cresol (D025),

cresol (D026), nitrobenzene (D036), pentachlorophenol (D037), pyridine (D038), 2,4,5-trichlorophenol (D041), and 2,4,6-trichlorophenol (D042).

– Pesticide toxic constituents - Method 8081A of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846. Pesticide toxic constituents include chlordane (D020), endrin (D012), heptachlor and its epoxide (D031), lindane (D013), methoxychlor (D014), and toxaphene (D015).

– Herbicide toxic constituents - Method 8151A of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846. Herbicide toxic constituents include 2,4-D (D016) and 2,4,5-TP (also known as Silvex, D017).

– Mercury (D009) - Method 7470A (aqueous samples) of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846.

– Metals/inorganics other than mercury - Method 6010B, or Method 6020 of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846. These constituents include arsenic (D004), barium (D005), cadmium (D006), chromium (D007), lead (D008), selenium (D010), and silver (D011).

5.2 Ignitability

American Society of Testing Materials (ASTM) method D-93-79 or D-93-80 or D-3278-78.

5.3 Corrosivity

Method 9045D or 9040C as set forth in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846.

5.4 Reactivity

7.3.3.2 or 7.3.4.2 of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846.

5.5 Total PCBs

SW-846 Method 8082, Analysis of Polychlorinated Biphenyls by Gas Chromatography is specified by regulation for determining the concentration of PCBs in wastes.

The results of RCRA characteristic analyses, the classification of the material based on historical information, as well as the material's status as presumptively

asbestos-contaminated, will be used as the basis for the Waste Profile for the particular waste stream.

6.0 Waste Packaging and Storage

Locked waste storage areas will be established in the southeast corner of the first floor of the Building to accommodate both categorized waste awaiting transport, and suspect waste awaiting analyses (See Attachment C). Storage areas will be plasticized, and any liquid storage will have secondary containment. Incompatible waste streams will be segregated, and waste labeling and signage will be in strict accordance with regulations. Within the storage area, posted signs, labeled accumulation start dates, labeled description of the waste, aisle space, proper segregation of incompatible and or/ignitable waste, etc. will be inspected on a daily basis by the Environmental Consultant. Statutory waste volume and holding times shall not be exceeded.

All containers on site will have proper labeling, which includes information such as waste type and accumulation date.

6.1 Asbestos Waste

Waste containing asbestos, containerized and labeled per NYS ICR 56 may be stored in an area maintained under a negative pressure ventilation system. ACM packaging and waste decontamination procedures will be in accordance with NYS Industrial Code Rule 56. Containers holding asbestos waste will be inspected daily to ensure no visible emissions of asbestos dust in the air or breaks in the container.

Storage of asbestos waste will not exceed 50 cubic yards. Authorization from the New York City Department of Sanitation (NYCDOS) and additional requirements, per code, will be required if accumulation of asbestos is anticipated to be greater than 50 cubic yards.

6.2 PPE and Remediation Process Consumables

PPE and Remediation Process Consumables will be packaged, labeled and stored as ACM waste as a minimum, and based on the results of the dust characterization study. In addition, packaging and storage of these wastes will be subject to the results of representative sampling conducted according to Section 4.2.

6.3 Hazardous Waste

Hazardous waste will be placed in containers made of or lined with materials that will not react with, and are otherwise compatible with, the hazardous waste to be stored so that the ability of the container to contain the waste is not impaired (e.g., USDOT approved drums, bags, roll-off

containers) and transferred to the waste storage area pending transport. While being accumulated on-site, each container shall be labeled or marked clearly with the words, "Hazardous Waste". Containers will be inspected at least weekly to identify any leaks, and/or deterioration caused by erosion or other factors, and to ensure containers are not over-packed. Hazardous waste will not be placed in an unwashed container that previously held an incompatible waste. Any disposal container holding a hazardous waste that is incompatible with any waste or other materials contained nearby will be separated from the other materials or protected from them by means of a dike, berm, wall, or other device.

6.4 Universal Waste

After having been cleaned of dust with HEPA-vacuuming and wet-wiping procedures, universal waste will be handled, packaged, and stored pending transport according to all regulations governing universal wastes. The requirements for handling, packaging and storage of hazardous waste apply, and are discussed in Section 6.3.

6.5 PCB Waste

Non-leaking PCB waste (PCB bulk product waste, including fluorescent light ballasts) will be packaged in suitable containers, properly labeled and stored for transport in the Waste Storage Area. Any leaking PCB articles or containers will be transferred to properly marked, non-leaking containers or an over-pack container, and likewise labeled and stored for transport.

6.6 Miscellaneous Contents

6.6.1 Containerized Chemicals/Products

Initial characterization has been conducted by review of existing labels and/or Material Safety Data Sheets (MSDSs), as noted in the *Chemical Log* in Attachment A. Specific requirements beyond initial characterization are found in the applicable federal, state and city solid and hazardous waste and DOT regulations. The Remediation Contractor will be required to identify and apply the specific regulatory programs applicable to specific waste types, and where appropriate, "Lab-Pack" them.

6.6.2 Fuels

All noted fuels are to be removed as a part of the ongoing characterization of the site under a re-opening of NYS DOL Variance 05-0919. If during remediation and demolition further fuel products are identified, the

Environmental Consultant will be notified and these materials will be immediately removed and legally disposed or recycled offsite.

6.6.3 Fire Extinguishers

In the case of both charged and discharged fire extinguishers, the manufacturer of the fire extinguisher will be contacted for the proper discharge and disposal method. Alternately, local fire department(s) may be contacted to determine if they would like to acquire the charged fire extinguishers for use in volunteer or community training exercises. If the above approaches prove impractical, fire extinguishers shall be depressurized in accordance with manufacture's recommendations and all regulatory requirements. Contained media shall be collected upon depressurization, characterized, and recycled or disposed as required. Empty extinguisher bodies shall be rendered inoperable by cutting in half or puncturing, then recycling as scrap metal or disposing as municipal solid waste.

6.6.4 Refrigerant-containing Equipment

Non-hazardous construction and demolition materials may contain regulated refrigerant including, but not limited to, possible refrigerant in the air conditioning and refrigeration systems. The refrigerant will be removed prior to disposal. Refrigerant-containing Equipment would be considered an appliance and is excluded from definition as C&D debris. For refrigerant-containing equipment, the following procedures shall be followed:

Verify refrigerant has been removed. If not, a licensed refrigerant removal service must be called to properly dispose of refrigerant.

Equipment that contains refrigerant will be HEPA vacuumed and wet-wiped before being staged in a clearly demarcated on-site area until the refrigerant has been removed by a licensed refrigerant removal service.

Remove door on refrigerators and freezers.

After removal of refrigerant and otherwise rendering the appliance safe, recycle or dispose of the appliances as scrap metal or as municipal solid waste, respectively.

7.0 Transportation Requirements

All waste materials will be transported in accordance with applicable local, state and federal DOT regulations including, but not limited to, bills of lading,

manifests, placards, etc. All wastes will be shipped using properly permitted vehicles operated by drivers with Commercial Drivers Licenses (CDLs) and Hazardous Materials endorsements. All hazardous waste will be shipped using transporters with RCRA identification numbers. The actual modes of transportation to be utilized will be determined following the identification of all anticipated waste streams and will take into account the location and distance to the selected disposal facility as well as cost considerations. All off-site shipments of waste will adhere to the site-specific transportation requirements. As required by NYSDEC (6 NYCRR Part 364) all hazardous and asbestos wastes will be transported using Part 364 permitted haulers.

Shipments of PCB waste must be in properly labeled and marked containers, the waste must be shipped under a properly executed manifest and Land Disposal Restriction (LDR) form, and the transporter must have a valid EPA Identification number and a valid New York State Part 364 transporter permit, as well as the latest version of U.S. Department of Transportation's Emergency Response Guide (2004). The vehicle in which PCB wastes are being shipped must be properly placarded and marked to reflect that it is transporting PCBs and must also be marked with the New York State waste transporter permit number on its sides and rear.

8.0 Travel Routes

Travel route(s) will be determined following discussion with the appropriate regulatory agencies (e.g., New York City Department of Transportation), and the Lower Manhattan Construction Command Center (LMCCC). The selected waste transporter(s) will follow the designated travel routes. Proposed routes are illustrated in Attachment B - These routes cannot be finalized until EPA approval of the project, as the timing and routing are interdependent on other project occurring in the area.

9.0 Disposal Facilities

Waste recycling/disposal facilities will be selected based on several factors including waste types, facility acceptance criteria, regulatory compliance history, etc.

Potential facilities to be used include:

Asbestos:	Meadowfill Landfill Route 2, Box 68, Bridgeport, WV 26330 Permit # SWF-1032/WV0109193
Lead:	Recyclable
RCRA Exceedance:	Republic Environmental Systems 2269 Sandstone Dr., Hatfield, PA 19440

EPA ID 085690592

Tanks: Republic Environmental Systems
2269 Sandstone Dr., Hatfield, PA 19440
EPA ID 085690592

Only those facilities that have valid federal/state/local permits to accept the waste type proposed for recycling/disposal at the facility will be used.

10.0 Documentation

All applicable local, state and federal documentation and record keeping requirements/guidelines will be followed. Documentation for hazardous waste disposal includes hazardous waste determination documentation including all analytical results, Hazardous Waste Manifesting, EPA Generator ID, EPA transporter ID, EPA ID for waste disposal facility and waste storage locations and capacities. Also documented will be emergency notification and operating procedures, organizational chart, unexpected waste procedures, contractor involvement list and copies of the regulatory requirement certifications of transporters, disposal facilities, etc. Specific regulatory documentation may change depending on the types and amounts of waste to be generated. The Contractor shall be responsible for document management.

All documentation noted under this Section shall be retained for a period of not less than three years after the completion of the project.

Attachment A:

Building Content Inventory/Chemical Log

Fiterman Hall Chemical Log					
Inventory ID	Item Name	Description	Model #	Quantity	Floor / Room #
1	NALCO CHEMICAL	NALCO 2833		2- 55GAL/1-20 Gal	BSMT
2	NALCO CHEMICAL	7383		1-55 GAL	BSMT
3	N/A	CORROSIVE		55 GAL	BSMT
4	N/A	CORROSIVE		55 GAL	BSMT
5	GOLD COAST	INT/EXT ENAMEL		2 GAL	BSMT
6	HAWTHORNE	ENAMEL		1 GAL	BSMT
7	ULTRA SERIS	9575 COOLING WATER		45 LBS	BSMT
8	HONEYWELL	GENETRON 123		300 LBS	BSMT
9	UNIVERSAL	SODIUM		40 GAL	BSMT
10	FIVE FLO.	MULTI COMPRESSOR OIL		20 GAL	BSMT
11	CONSUMER OIL CO.	LUBRICANT OIL		1/2 GAL	BSMT
12	FIVE FLO.	COMPRESSOR OIL		20 GAL	BSMT
13	CHLIDERS	CP-50A		1 GAL	BSMT
14	TEXACO	0927 MARFAIO		80 LBS	BSMT
15	HIGH LOAD	MULTI VIS GEAR OIL		80 LBS	BSMT
16	N/A	N/A	N/A	N/A	N/A
17	GOLD COAST ENAM GRIP	INT/EXT PAINT	37.00	8	BSMT
18	GOLD COAST ENAM GRIP	GRAY	16.00	7	BSMT
19	TURPINTINE	1 GALLON		1	BSMT
20	TURPINTINE (TRPS)	PAINT 32OZ Solvent		1	BSMT
21	HYDROLIC OIL	ISO 32		55 GAL	BSMT
22	A-1 HEAVY DUTY CLEANER	ZEP		20 GAL	BSMT
23	ZEP	DYNA 143		55 GAL (2)	BSMT
24	MISTY COLE CLEANER		WT417	55 GAL.	BSMT
25	MISTY	AIR FRESH/DEOD.	P-201	55 GAL	BSMT
26	CHEMCO	FOAM HEAVY DUTY CLEANER	1,085.00	55 GAL	BSMT
27	ZEP	A-F SMOKE SCREEN		64 OZ	BSMT
28	KEYLON	SPRAY PAINT		24 OZ	BSMT
29	HAWTHORNE	ENAMEL PAINT	42 BOX	4/1 GAL	BSMT
30	GOLD COAST	ENAMEL PAINT		3/1 GAL	BSMT
31	MERCURY	ACRYLIC LATEX		5 GAL	BSMT
32		RED GREASE	920-1020493	5 GAL	BSMT
33	E-K INDUSTRIE	4510 GLYERCIN		1 GAL	BSMT
34	PARKER	HIGH CAPACITY LIQUID LINE		5 PINTS	BSMT
35	TRU BONI	FL. COVERING ADHESIVE		2 (1GAL)	BSMT
36	CERTIFIED	BEXANE BASE A		22.2 OZ	BSMT
37	CERTIFIED	BEXANE HARDNER		22.2 OZ	BSMT
38	RERRIGERANT 11	REFRIG 11		20 GAL	BSMT
39	AM SOLV.	ANCIDE 5815		10 GAL	BSMT
40	SHERWIN WILLIAMS	INDUSTRIAL ENAMEL		19 (1 GAL)	BSMT
41	IRONCLAD	QUICK DRY INDUSTRIAL ENAMEL		13 (1 GAL)	BSMT

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Inventory ID	Item Name	Description	Model #	Quantity	Floor / Room #
42	IMPERVO	LOW LUSTRE ENAMEL		9 (1 GAL)	BSMT
43	INSLX	HIGH GLOSS ENAMEL		6(1 GAL)	BSMT
44	OX O DECK	FL,PORCH, DECK ENAMEL		1 GAL	BSMT
45	LAZON	ACRYLIC LATEX		1 GAL	BSMT
46	DUPONT	FREON 500		1 CARRITTE	BSMT
47	LARCOLID	LATEX		10 GAL	BSMT
48	SPEEDY SATIN	LATEX SEMI GLOSS		1 GAL	BSMT
49	DABAIS			1 QT	BSMT
50	SHERWIN WILLIAM	EXTERIOR LATEX PAINT		4.5 GAL	1ST FL.
51	DITMAR PAINT CO.	PAINT		4.5 GAL	1ST FL.
52	U.S.A.	PAINT THINNER		1.0 GAL	1ST FL.
53	SHERWIN WILLIAM	INTERIOR PAINT		4.5 GAL	1 ST FL.
54	SHERWIN WILLIAM	EXTERIOR PAINT		4.5 GAL	1ST FL.
55	ROPAK	UNKNOWN		10 GAL	3RD FL.
56	ROBERT 3000	FLOOR COVERING ADHESIVE		4.5 GAL	3 RD FL.
57	MAPEL LL-2	LIQUID LATEX		5 GAL	3RD FL.
58	TAYLOR	BLACK THIN TILE ADHESIVE		35 GAL	3RD FL.
59	ACETYLENE SUPPLY CO.	ACETYLENE		20LBS	3RD FL.
60	N/A	OXYGEN- CANISTER		10LBS	3RD FL.
61	ZEP	RUST-REMOVER		1 GAL	3RD FL.
62	MISC. AEROSOL CANS	FILM-LUBRICAN-SOLVENT DEGREASSER		1 BOX	3RD FL.
63	PARKER	HIGH CAPACITY CORE		1 BOX	3RD FL.
64	TREMSTOP	FIRE STOPPING ACRYLIC		6 (5 GAL)	6TH FL.
65	DAP	CARPET ADHESIVE		1/2 CAL	8TH FL.
66	USA	XYLENE		1/4 GAL	8TH FL.
67	SHERWIN WILLIAMS	PRO MAR		2 2/1 GAL	8TH FL.
68	E-Z	DENTURED ALCHOL		1 GAL	8TH FL.
69	GOLD COAST	ENVIRO FLEX		14 1- GAL	8TH FL.
70	DAP	ACRYLIC COVE ADHESIVE		6- 1 GAL	8TH FL.
71	SHEEN	SEMI GLOSS LATEX		1/2 GAL	8TH FL.
72	MIRACLE	BLK MAGIC TYPE M		1 GAL	8TH FL.
73	LARCOLOID	RUST INHIBITOR		1 GAL	8TH FL.
74	REDSTAR	SEMI GLOSS		1 GAL	8TH FL.
75	55	DEGRASER		1 CAN	8TH FL.
76	MINWAX (FLOORS)	POLYURETHANE		1 GAL	8TH FL.
77	ZEP	GREASE MONKEY		1 CAN	8TH FL.
78	ZEP	DRILL CHILL		1 CAN	8TH FL.
79	MINWAX	WOOD FINISH		8 PINTS	8TH FL.
80	BEN MOORE	ENAMEL		1 GAL	8TH FL.
81	DAP	CONTACT CEMENT		2 GAL	8TH FL.
82	DAP	CARPET ADHESIVE		2 GAL	8TH FL.
83	AMERICAN POLYMER	ANTI GRAFITTI		1 PINT	8TH FL.

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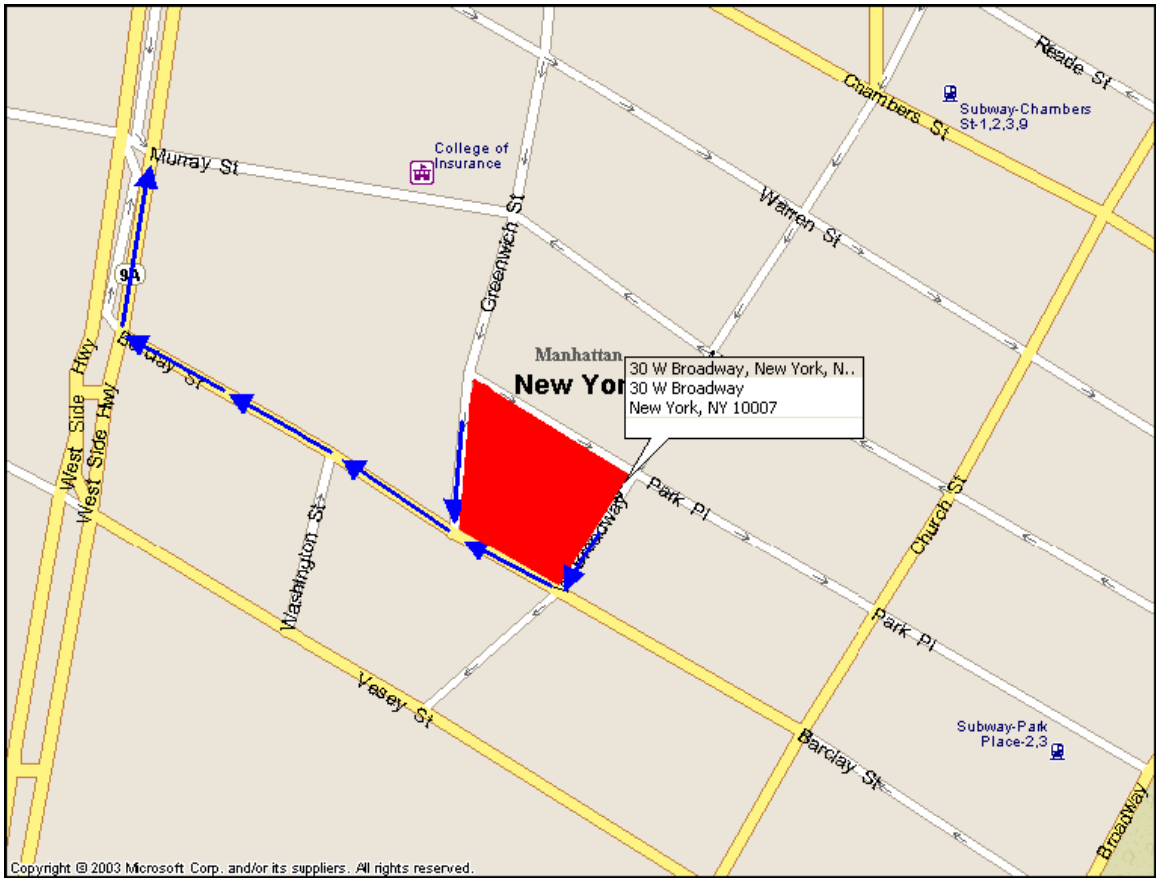
Inventory ID	Item Name	Description	Model #	Quantity	Floor / Room #
84	DAYTON	INDUSTRIAL		CAN AERSOL	8TH FL.
85	ZEP-OFF	PAINT REMOVER		CAN AERSOL	8TH FL.
86	A-1	BLEACH		1 GAL	8TH FL.
87	COLUMBIA	PRE-K 52 CARPET		1 GAL	8TH FL.
88	MIRACLE	BLACK M TYPE		1 GAL	8TH FL.
89	ACE	HYDRAULIC OIL		1 GAL	8TH FL.
90	430 CLEAR PRO	FL. TILE ADHESIVE		5 GAL.	8TH FL.
91	BEN MOORE	LATEX		5 GAL.	8TH FL.
92	BEN MOORE	ENAMEL		5 GAL	8TH FL.
93	PRO MAR 400	LATEX		5 GAL	8TH FL.
94	MERCURY	ACRYLIC LATEX		5 GAL	8TH FL.
95	BEN MOORE	METAL/WOOD ENAMEL		1 GAL	8TH FL.
96	KRYLON	VARIOUS CANS OF AERESOL		1 CASE	8TH FL.
97	SOFTE SET	TOP GUN ADHESIVE		4 Gal	8TH FL.
98	N/A	GASOLINE		4.5GAL	GROUND
99	E-Z	TURPINTINE		1 GAL	GROUND
100	EVERMARE	LATEX PAINT		1/2 GAL	GROUND
101	SHERWIN WILLIAMS	LATEX		5 GAL	GROUND
102	GAIDNER	ROOF CASTING		1/4 (GALLONS)	GROUND
103	GRACE	BUTHENE		5-1 ganl cans	GROUND
104	E-Z	PAINT THINNER		1 GALLON	GROUND

Chemical Log 12/23/2005

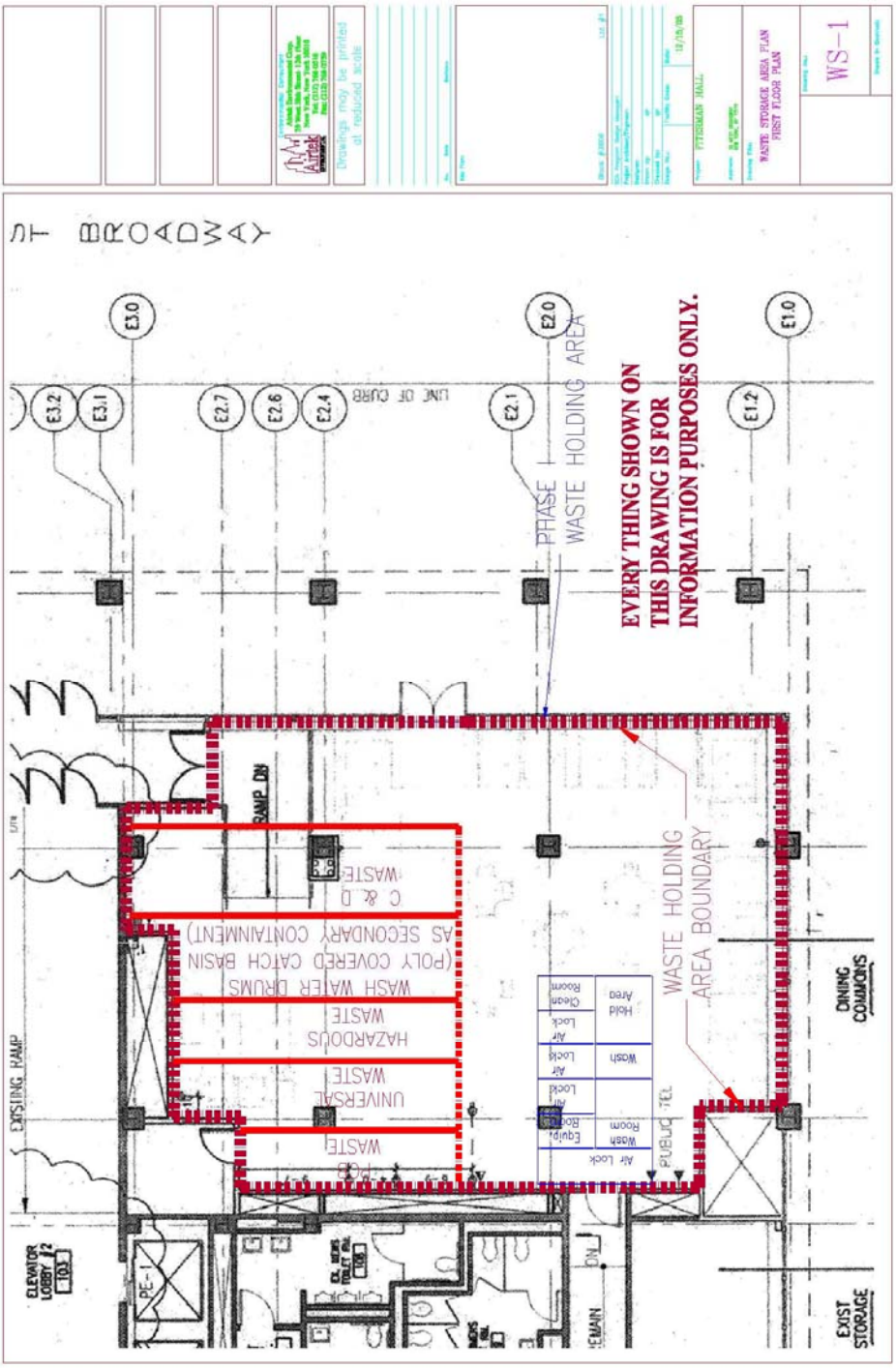
Attachment B:

Waste Routes



Attachment C:

Waste Storage Areas


WS-1
WASTE STORAGE AREA PLAN
FIRST FLOOR PLAN
FITERMAN HALL
Drawings may be printed at reduced scale
E3.0
E2.0
E1.0
E3.2
E3.1
E2.7
E2.6
E2.4
E2.1
E1.2
LINE OF CURB
PHASE I WASTE HOLDING AREA
EVERY THING SHOWN ON THIS DRAWING IS FOR INFORMATION PURPOSES ONLY.
RAMP DN
C & D WASTE
(POLY COVERED CATCH BASIN AS SECONDARY CONTAINMENT)
WASH WATER DRUMS
HAZARDOUS WASTE
UNIVERSAL WASTE
WASTE
WASTE HOLDING AREA BOUNDARY
Hold Area
Clean Room
Air Lock
Wash
Air Lock
Air Lock
Wash Room
Equip. Room
Air Lock
PUBLIC TEL
DINING COMMONS
EXISTING RAMP
ELEVATOR LOBBY F2
EXIST STORAGE
DN

Attachment D:

Quality Assurance Project Plan

(Quality Assurance Project Plan (QAPP) for waste characterization is under development per USEPA QAPP Guidance Issued 11/22/05. The QAPP will be finalized based upon the specifics of Regulator comments on the proposed waste plan.)